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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/106,784	06/29/98	PEDNAULT	E Y0998-256

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EXAMINER

BRODA, S

ART UNIT	PAPER NUMBER
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2763

DATE MAILED: 06/02/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.  
**09/106,784**

Applicant(s)

**Pednault**

Examiner

**Samuel Broda**

Group Art Unit

**2763**

☒ Responsive to communication(s) filed on 17 Mar 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claim

☒ Claim(s) 1-20 is/are pending in the application

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-20 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 2763

### DETAILED ACTION

1. This communication is in response to Applicant's Amendment Under 37 C.F.R. §1.111 dated 17 March 2000. Claims 1 and 2 were amended; claims 3-20 were added.

#### *Claim Rejections - 35 U.S.C. § 101*

2. The following is a quotation of 35 U.S.C. 101:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2.1 As discussed below, product claims 1-20 are rejected because the underlying process invention comprises an abstract idea.

2.2 Regarding Claim 1, this claim is directed to "A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform method steps for constructing predictive models", and the steps recited in Claim 1 describe mathematical operations comprising the abstract idea of generating models that account for missing or otherwise unknown data values.

For the purposes of examination, the "device" of claims 1-20 will be read broadly to comprise a product claim that encompasses any and every computer implementation of a process. Neither the detailed description of the invention nor the drawings supply any tangible description of a computer implementation of the invention.

In this situation, the following paragraph in the Guidelines at IV.B.2.(a)(ii) appears controlling:

Art Unit: 2763

If a claim is found to encompass any and every product embodiment of the underlying process, and if the underlying process is statutory, the product claim should be classified as a statutory product. By the same token, if the underlying process invention is found to be non-statutory, Office personnel should classify the “product” claim as a “non-statutory product.” If the product claim is classified as being a non-statutory product on the basis of the underlying process, Office personnel should emphasize that they have considered all claim limitations and are basing their finding on the analysis of the underlying process.

[Emphasis supplied.]

Therefore, Claim 1 is rejected as being classified as a non-statutory product because the underlying process invention as claimed by Applicant is non-statutory. The method steps in Claim 1 do not: (1) recite data gathering limitations or post-mathematical operations that might independently limit the claims beyond the performance of a mathematical operation; or (2) limit the use of the output to a practical application providing a useful, concrete, and tangible result.

**2.3** Regarding claims 2-20, the limitations supplied in these claims do not: (1) recite data gathering limitations or post-mathematical operations that might independently limit the claims beyond the performance of a mathematical operation; or (2) limit the use of the output to a practical application providing a useful, concrete, and tangible result. The analysis and conclusion regarding non-statutory subject matter is identical to Claim 1 above.

### ***Applicant's Argument***

**4.** Applicant argues that the amended claims meet the requirements under 35 U.S.C. § 101 as described in *AT&T Corp. v. Excel Communications Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999) because “Applicants [sic] submit that they have developed a useful, concrete and tangible result from the claimed features, the utility being clearly described in the application.” Amendment, page 11.

Art Unit: 2763

Applicant further argues that the added limitation “outputting a specification of at least one of said subordinate models and making a prediction based on said at least one of said subordinate models thus generated” clearly defines “post-computation/mathematical operation processing” making amended Claim 1 statutory. See Amendment, page 12.

***Examiner’s Reply***

5. The Examiner respectfully disagrees with Applicant’s arguments for the following reasons.

5.1 Regarding Applicant’s argument based on *AT&T Corp. v. Excel Communications Inc.*, although the Applicant has identified a practical application (direct-mail targeted-marketing) for the method steps recited in Claim 1, the claim itself contains no corresponding limitation.

A review of the claims analyzed by the Federal Circuit in:

(1) *In re Alappat*, 31 USPQ2d 1545 (Fed. Cir. 1994);

(2) *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 47 USPQ2d 1596 (Fed. Cir. 1998); and

(3) *AT&T Corp. v. Excel Communications Inc.*, 50 USPQ2d 1447 (Fed. Cir. 1999),

demonstrate the differences between claims held statutory under 35 U.S.C. § 101 and claims 1-20 submitted by Applicant.

Art Unit: 2763

In *Alappat*, Claim 15 was directed at a “rasterizer for converting vector list data” and included means for “outputting illumination intensity data as a predetermined function.” 31 USPQ at 1553.

The Federal Circuit held the claim as reciting “a specific machine” that produced “a useful, concrete, and tangible result.” 31 USPQ2d at 1557. Applicant’s claims contain no similar limitation to a useful, concrete, and practical result.

In *State Street*, Claim 1 was directed at a “data processing system for managing a financial services configuration” and included means for processing daily asset value data and means for “allocating the percentage share that each fund holds”. 47 USPQ 2d at 1599.

The Federal Circuit held that the transformation of data representing dollar amounts into a final share price, produced a “useful, concrete, and tangible result.” 47 USPQ at 1601. Applicant’s claims contain no similar limitation to a useful, concrete, and practical result.

In *AT&T v. Excel*, Claim 1 was directed at a “method for use in a telecommunications system in which interexchange calls initiated by each subscriber are automatically routed over the facilities of a particular one of a plurality of interexchange carriers associated with that subscriber”, and included steps of “generating a message record for an interexchange call” and including a primary interexchange indicator in each generated message record. 50 USPQ2d at 1449.

Art Unit: 2763

The Federal Circuit held the claim produced a “useful, concrete, and tangible result.” 50 USPQ 1452. Applicant’s claims contain no similar limitation to a useful, concrete, and practical result.

5.2 Regarding Applicant’s argument that amended claim 1 is statutory because the claim contains “post-computation/mathematical operation processing”, this argument is rejected as the amended claim language contains no post-computer process activity but represents the output of a mathematical algorithm. As explained in *State Street*,

... the mere fact that a claimed invention involves inputting numbers, calculating numbers, outputting numbers, and storing numbers, in and of itself, would not render it non-statutory subject matter, unless, of course, its operation does not produce a “useful, concrete, and tangible result.”

*State Street* at 1602. As previously explained, Applicant’s claimed invention does not produce a useful, concrete, and tangible result, but describes a mathematical algorithm used to construct a predictive model. The claimed invention takes a set of data----abstract numbers----and generates mathematical models used to predict (abstract) numbers, even when some data values are unknown.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE

Art Unit: 2763

ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Samuel Broda, whose telephone number is (703) 305-1026. The Examiner can normally be reached on Mondays through Fridays from 8:00 AM – 4:30 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kevin Teska, can be reached on (703) 305-9704. The fax phone number for this group is (703) 308-1396.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist, whose telephone number is (703) 305-3900.



KEVIN J. TESKA  
SUPERVISORY  
PATENT EXAMINER